acute mitral regurgitations. MC had a 87% case-fatality rate and became the second cause of death after cardiogenic shock in the whole group (39 of 144 deaths, 27%). MC were more frequent in women (13% vs 6%, p = 0.006), pts with dyslipemia (17% vs 8%, p < 0.01) and with Q-wave MIs (11% vs 1%, p = 0.01) and less frequent in smokers (5% vs 11%, p = 0.058) and pts with preinfarction angina (6% vs 11%, p = 0.11). By multivariate analysis, Q-wave MIs (OR: 8.8; 95% CI: 1.8–158) and dyslipemia (OR: 2.4; 95% CI: 1.2–4.8) were identified as independent predictors of MC development whereas previous angina was a protective factor (OR: 0.44; 95% CI: 0.17–0.99).

Cardiac rupture (free wall + interventricular septum) occurred only in Q-wave MIs, and was more frequent in women (11% vs 6%, p < 0.05) and less frequent in pts with preinfarction angina (4% vs 10%, p = 0.06). The latter was selected as the only factor independently associated with cardiac rupture (OR: 0.35, 95% CI: 0.12–0.87).

Conclusions: 1) Elderly patients with a first AMI have a relatively high incidence of MC, particularly of FWR, 2) MC have a very high case-fatality rate and are the second cause of death in these patients. 3) The most important predictors of the appearance of MC in the elderly are the presence of Q-wave infarctions, the antecedent of dyslipemia and the absence of a history of preinfarction angina.

1105-70 Short- and Long-term Prognosis of Elderly Patients With First Acute Inferior Myocardial Infarctions

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Among patients (pts) with acute inferior myocardial infarction (IAMI), the elderly have a worse short-term prognosis, especially those with right ventricular involvement (RVI). However, long-term prognosis and mortality prediction in this subgroup of pts have not been previously investigated.

The long-term survival and its determinants were studied in 202 consecutive pts ≥75 years old admitted to our CCU for their first IAMI from 1988 to 1995. A complete follow-up was obtained in 98.5% of pts with a mean duration of 48 ± 5 months. In-hospital case fatality rate was 30% and other 26% died during follow-up. Mean survival was 45 ± 6 months (95% CI: 39–51 months). Two multivariate analyses were performed, the first included the whole population and analyzed in-hospital mortality, the second analyzed late mortality of hospital survivors (Cox regression model). Independent predictors are shown inthe table.

	Hospital mortality			Postdischarge mortality		
	OR	95% CI	p	OR	95% CI	p
Age (per year)	1.16	1.05–1.29	< 0.005	1.11	1.02–1.19	< 0.02
Diabetes	2.12	1.36–3.29	0.034	2.63	1.28–5.41	< 0.01
RVI	2.15	1.38–3.36	< 0.0001	-	-	NS
LVEF < 30%	4.05	1.13–14.9	0.032	2.75	1.08–7.06	< 0.04
Exercise testing	Not tested	Not tested	Not tested	0.32	0.13–0.78	< 0.02

Conclusions: In-hospital mortality of IAMI is very high in elderly pts (30%). Mean late mortality is 26% at 4 years. Advanced age, diabetes and a severely depressed LVEF are short- and long-term mortality predictors. RVI is a strong predictor of in-hospital but not postdischarge death. The ability to perform a predischarge exercise stress testing is associated with a higher late survival rate.

1106 Repolarization/Cardiomyopathy

Tuesday, March 31, 1998, 9:00 a.m.–11:00 a.m.
Georgia World Congress Center, West Exhibit Hall Level
Presentation Hour: 10:00 a.m.–11:00 a.m.

1106-89 Prognostic Significance of Prolonged Repolarization at Discharge in a Large Population of Post-Myocardial Infarction Patients

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Background: Despite extensive research, the prognostic significance of prolonged repolarization in post-myocardial infarction (MI) pts remains unclear.

Methods: We performed a systematic reanalysis of the resting ECG obtained at discharge in 11,539 pts with confirmed MI among those enrolled in the GISSI-3 study. Prognostic value of QTc in D_2 (Bazett formula) was assessed in 9847 pts who were in sinus rhythm and had a QTc measurable.

Results: Six-month mortality progressively increased for each quartile of QTc:

QTc	< 390 msec	390–416 msec	417–443 msec	≥443 msec
n. of patients	n = 2571	n = 2558	n = 2299	n = 2419
6-mo mortality	2.2	3.3	4.0	6.1

The RR for pts with QTc ≥417 was 1.9 (95%CI 1.5–2.3) compared to pts with QTc ≤417 msec. Multivariate analysis including, among 23 potential confounding factors, age, sex, history of angina, hypertension or diabetes, time to treatment, infarct size, left ventricular dysfunction, concomitant treatments and heart rate at discharge showed an independent, albeit modest prognostic significance of a prolonged QTc, with an RR for pts with QTc ≥417 msec of 1.25 (95%CI 1.01–1.56) compared to pts with QTc <417 msec.

Conclusions: Prolonged QTc from surface ECG is independently associated with an increased mortality post-discharge in post-MI pts. This simple measurement from the surface ECG adds information relevant to risk stratification in post-MI pts.

1106-90 Gender Differences in Heart Rate-dependent Variations of QT Intervals in Post-Myocardial Infarction Patients

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Circadian variations of the QT interval reflect the effect of the autonomic nervous system on ventricular repolarization. This QT dynamicity has been proposed as a tool for assessing patients at risk of ventricular arrhythmias. Some experimental and clinical studies suggest gender differences in cardiovascular autonomic control.

We compared rate-dependent changes in QT intervals in 23 women and 60 men, over 50 years of age, one week after myocardial infarction. A 24-hour digitized 3-lead ECG was recorded in all patients. The QT intervals (QT apex and QT end) were measured automatically with a validated computerised Holter system.

Gender comparisons of QTc and duration measured at mean heart rate and of the relation between heart rate and QT intervals durations are displayed in the following table:

	Women	Men	p value
QTc end at mean heart rate	435 ± 27	432 ± 33	0.73
QT end/RR slope 24 h	0.24 ± 0.10	0.17 ± 0.10	0.01
QT end/RR slope day	0.20 ± 0.11	0.15 ± 0.10	0.05
QT end/RR slope night	0.25 ± 0.17	0.17 ± 0.08	0.01
QT apex/RR slope 24 h	0.25 ± 0.15	0.16 ± 0.08	0.01
QT apex/RR slope day	0.23 ± 0.15	0.15 ± 0.09	0.01
QT apex/RR slope night	0.24 ± 0.21	0.15 ± 0.11	0.02

These results show differences in the pattern of QT adaptation to heart rate in women and men after myocardial infarction. They suggest a different effect of the autonomic nervous system on ventricular repolarization in women and men following myocardial infarction.

1106-91 Effect of Hormone Replacement Therapy on QT Interval

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Background: Gender differences in the corrected QT interval (QT_C) were first reported by Bazett in the 1920's. Experimental studies have suggested that sex hormones may alter potassium channel expression subsequently lengthening the QT interval.

Methods: To evaluate the effects of estrogen (E) and progesterone (P) on QT interval, 277 consecutive post-menopausal women presenting for heart disease screening were analyzed based on hormone replacement therapy (HRT) status. Sixty-nine women were excluded for medications which alter the QT interval, vaginal estrogens, EKG abnormalities and probable or definite heart disease. Rate correction of the QT interval was achieved by using Bazett's formula and a linear correction QT_{LC} = QT + 0.154 (1-R-R) which has been shown to be more accurate at higher heart rates. Comparisons were then made between heart rate (HR), QT_C and QT_{LC} with regard to status of HRT and type of HRT:

HRT	N	QT_C	QT_{LC}	HR
No	132	423.0 ± 16.5	414.2 ± 15.8	69.8 ± 10.3
Yes	76	426.4 ± 17.6	417.3 ± 14.9	68.9 ± 9.3
HRT TYPE				
E	30	422.3 ± 16.1	417.0 ± 15.5	66.1 ± 7.5
E + P	44	428.7 ± 18.6	417.5 ± 14.7	70.8 ± 10.1

Results: No significant differences were noted based on HRT status or type of HRT. Given the sample size, an effect on corrected QT interval of <8 msec cannot be excluded.